



Groundwater Integrated Management



Research Priorities

Sustainable water resource management

Integrated catchment management (ICM)

Groundwater
and Surface Water

Groundwater quantity
allocation

Groundwater quality
management

Surface water

National issues

Allocation effects on in-stream
values

Establishing sustainable
groundwater allocation

Transport and fate of nutrients
and pathogens

Saline intrusion risk

Establishing ecologically
sustainable nutrient allocation

Making good management
decisions around abstraction of
hydrocarbons

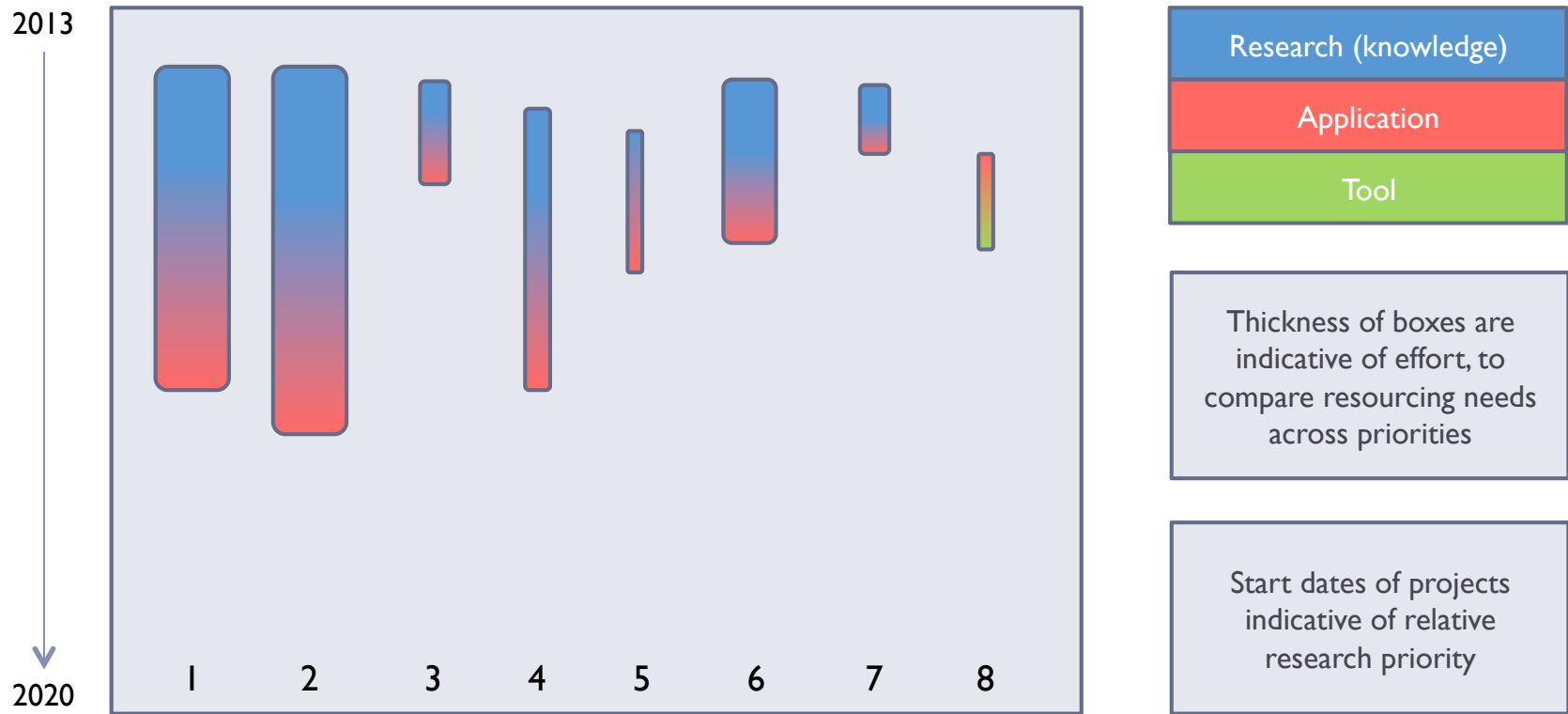
Vulnerability of groundwater and
supply bores to land use

Setting water quality baselines or
reference states

8 Critical Research Issues

- ▶ Establishing ecologically sustainable nutrient allocation and establishing the time lag to reverse nutrient effects.
- ▶ Establishing the transport and fate of nutrients and pathogens in a variety of groundwater and hydraulically connected surface water systems.
- ▶ Effects of groundwater abstraction on surface water in-stream values.
- ▶ Establishing sustainable groundwater allocation limits.
- ▶ Vulnerability of groundwater and supply bores to land use.
- ▶ Setting water quality baselines or reference states.
- ▶ Making good management decisions around abstraction of hydrocarbons.
- ▶ Saline intrusion risk in an environment of rising sea levels.





1. Setting sustainable nutrient loads (limits)
2. Denitrification / nutrient assimilation (including vadose)
3. GW abstraction effects on surface waters (SWIM)
4. Sustainable / acceptable quantity and quality allocation (including social and economic)

5. Vulnerability of supplies to microbial contamination
6. Setting water quality baselines
7. Management of hydraulic fracturing / petroleum
8. Saltwater intrusion

